

訂正版

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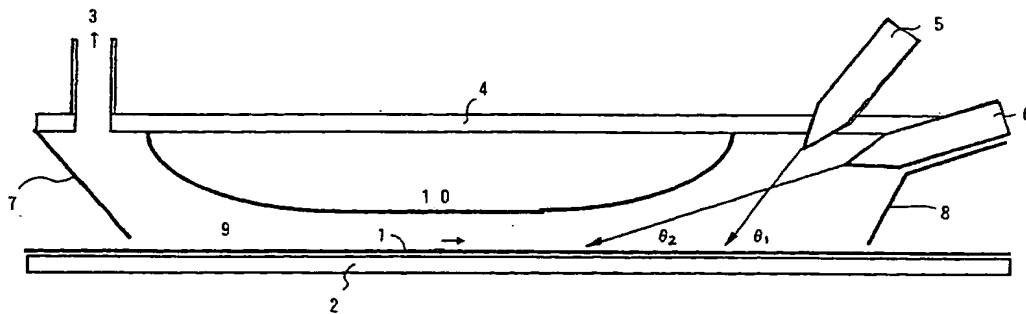
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(54) Title: METHOD FOR FORMING METAL OXIDE COATING FILM AND VAPOR DEPOSITION APPARATUS

(54) 発明の名称: 金属酸化物被膜の成膜方法および蒸着装置



(57) Abstract: A photocatalyst composite material having a titanium oxide photocatalyst coating film on the surface of a base is produced by a CVD method wherein a  $\text{TiCl}_4$  vapor is reacted with a water vapor. The  $\text{TiCl}_4$  vapor and the water vapor are sprayed into a deposition chamber (9) respectively from nozzles (5) and (6) so that the spray streams of these vapors meet and thus are mixed with each other before reaching the base. The mixed vapor is brought into contact with a base (1) which is moving in one direction within 3 seconds from the mixing. It is preferable to spray the  $\text{TiCl}_4$  vapor from a porous nozzle (5) in a direction opposite to the moving direction of the base while it is preferable to spray the water vapor from a slit nozzle (6) whose crossing angle to the base is smaller than that of the porous nozzle (5).

(57) 要約:  $\text{TiCl}_4$  蒸気と水蒸気とを反応させる CVD 法により、基材表面に酸化チタン光触媒被膜を有する光触媒複合材を製造する。蒸着室 (9) に、それぞれノズル (5) および (6) から、 $\text{TiCl}_4$  蒸気および水蒸気を、それらの噴射流が基材に到着する前に交差するように噴射して、両蒸気を混合する。この混合から 3 秒以内に、混合蒸気を 1 方向に移動する基材 (1) と接触させる。 $\text{TiCl}_4$  蒸気は基材進行方向に対して逆向きに配置された多孔式ノズル (5) から、水蒸気は基材との交差角がより小さいスリット式ノズル (6) から噴射することが好ましい。

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NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

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(15) 訂正情報:  
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2 文字コード及び他の略語については、定期発行される各PCTガゼットの巻頭に掲載されている「コードと略語のガイダンスノート」を参照。

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2004/009903

## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 2000-64050 A (Asahi Glass Co., Ltd.), 29 February, 2000 (29.02.00), Full text (Family: none)	1-16
A	JP 7-3463 A (Glaverbel), 06 January, 1995 (06.01.95), Full text & GB 2274115 A & DE 4400208 A1 & DE 4400209 A1 & FR 2700325 A1 & FR 2700326 A1 & NL 9400041 A & NL 9400042 A & SE 9400037 A & SE 9400038 A & CA 2113028 A & CA 2113029 A & LU 88451 A & LU 88450 A & JP 7-2548 A & CZ 9400016 A3 & CZ 9400017 A & US 5522911 A & BE 1008559 A3 & BE 1008560 A3 & CH 687203 A5 & CH 687204 A5 & US 5709726 A & ES 2111418 A1 & ES 2112093 A1 & AT 9400014 A & AU 9400013 A & US 6112554 A	1-16
A	JP 7-110994 B2 (Elf Atochem North America, Inc.), 29 November, 1995 (29.11.95), Full text & WO 8900549 A & AU 8819344 A & ES 2009963 A & CN 1030946 A & FI 9000082 A & EP 370027 A & US 4928627 A	1-16
A	JP 5-195230 A (Sumitomo Electric Industries, Ltd.), 03 August, 1993 (03.08.93), Full text (Family: none)	1-16
A	JP 4-80371 A (Canon Inc.), 13 March, 1992 (13.03.92), Full text (Family: none)	1-16
A	JP 9-59777 A (Sekisui Chemical Co., Ltd.), 04 March, 1997 (04.03.97), Full text (Family: none)	1-16

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International application No.

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## A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl<sup>7</sup> C23C16/40, C23C16/455, B01J35/02, C01G23/07

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl<sup>7</sup> C23C16/00-16/56, C03C5/00-23/00, B01J35/02, C01G23/07

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

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Kokai Jitsuyo Shinan Koho	1971-2004	Toroku Jitsuyo Shinan Koho	1994-2004

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 2000-266902 A (Inax Corp.), 29 September, 2000 (29.09.00), Full text (Family: none)	1-16
A	JP 61-50892 B2 (BFG Glassgroup), 06 November, 1986 (06.11.86), Full text & DE 2929092 A & GB 2026454 A & BE 877465 A & NL 7905581 A & SE 7906223 A & DK 7903057 A & FR 2456077 A & US 4293326 A & CA 1138725 A & IT 1120990 B	1-16

☒ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

\* Special categories of cited documents:

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